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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p align="center">10/773,226</p> | <p>Applicant(s)</p> <p align="center">SEGEL, JONATHAN DEAN</p> | |
| | <p>Examiner</p> <p align="center">Tung Q. Tran</p> | <p>Art Unit</p> <p align="center">2616</p> | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/16/2005</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: ____.</p> |
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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations "said user interface" in line 10 and "said wireless link" in line 11. There is insufficient antecedent basis for these limitations in the claim.

Claim 13 recites the limitations "a wireline access link" in line 1 and "a wireline link" in line 4. It is unclear which one of them the Applicant intended to claim in line 5 ("said wireline link").

- Claim 34 recites the limitation "said user-programmable link preferences" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 43 recites the limitation "said time intervals" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 35, the Applicant claims "wherein said user-programmable link preferences include dividing the total bandwidth between said user site and said provider network into a first bandwidth for said wireline link and a second bandwidth for said wireless link" which is not supported by the specification. The Applicant does not disclose how to implement this limitation in the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626; hereinafter Li) in view of Dop et al. (US Patent No. 5,185,779; hereinafter Dop).

Li discloses a system and method for failure recovery of high-speed modems (see the Title) comprising the following features.

Regarding claim 1, a wireless protection system for establishing high availability communications (see the Title), comprising: a wireline link processor (Fig. 11, High-

speed Modem 30) for connecting a user site to a network provider site over a broadband access connection (Fig. 11, High-speed Modem 30 connecting to Internet 25); a dial-up modem for connecting said user site and said provider network site over a backup connection (Fig. 11, Dial-up modem 50 connecting to Internet 25); means for monitoring operation of said wireline link (see “The modem interchange software detects” recited in para. [0033] on page 3) and generating a fault signal upon detection of a specified under-performance condition of the broadband access connection (see “communicates the failure to the modem backup software module” recited in para. [0033] on page 3); and means for switching user traffic received over said user interface between said wireline and dial-up link according to said fault signal (see “switch from the high-speed modem to a dial-up modem” recited in para. [0033], page 3; and how “the data redirection software module” redirects all data recited in [0034], page 30).

Regarding claim 2, wherein said fault signal indicates a failure of the wireline link (see “detects the high-speed modem failure” recited in para. [0033] on page 3).

Regarding claim 9, wherein said means for switching is a data packet switch (Fig. 11, Router 175) for communicatively coupling said user interface to one of dial-up link processor and said wireline link processor under control of said means for monitoring (Fig. 11, Dial-up Modem 50 and High-speed Modem 30).

Regarding claim 10, wherein said means for switching is one of a router and an OSI layer 3 switch (Fig. 11, Router 175).

Regarding claim 11, wherein said means for switching is an OSI layer 2 Ethernet switch (Fig. 11, Router 175; and see “LAN” recited in para. [0089], page 7).

Li does not disclose the following features: regarding claim 1, a wireless link processor for connecting said user site and said provider network site over a backup connection; and means for switching user traffic received over said user interface between said wireline and said wireless link according to said fault signal; regarding claim 9, wherein coupling said user interface to one of said wireless link processor and said wireline link processor under control of said means for monitoring; regarding claim 12, wherein said means for switching is a physical layer media switch.

Dop discloses the cellular alarm backup system (see the Title) comprising the following features:

Regarding claim 1, a wireless link processor (see cellular system recited in the Abstract) for connecting said user site and said provider network site over a backup connection (see cellular system transmitting call to a central alarm station recited in the Abstract); and means for switching user traffic received over said user interface between said wireline (see telephone land line recited in the Abstract) and said wireless link (see cellular system recited in the Abstract) according to said fault signal (see switching the telephone line over the cellular system upon a inoperativeness of the telephone line recited in the Abstract).

Regarding claim 9, wherein coupling said user interface to one of said wireless link processor and said wireline link processor under control of said means for monitoring (see switching the telephone line over the cellular system upon a inoperativeness of the telephone line recited in the Abstract).

Regarding claim 12, wherein said means for switching is a physical layer media switch (see Fig. 1, Box 12; and see "Box 12" recited in col. 4, line 54 continues to col. 5, line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Dop, in order to implement the system easier and keep it work in almost any topology.

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Dop et al. (US Patent No. 5,185,779) and further in view of Antoniou et al. (US Patent No. 6,965,775; hereinafter Antoniou).

Li and Dop disclose the claimed limitations in paragraph 6 above. Li and Dop do not disclose the following features: regarding claim 3, further comprising at said user site means for filtering said user traffic on receipt of the fault signal for selecting high-priority traffic to be carried over said backup connection; regarding claim 4, further comprising link filtering means at the network provider site for selecting high-priority traffic to be carried to said user site over said backup connection on receipt of said fault signal; regarding claim 5, further comprising: means for filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the high priority traffic to be transmitted over said backup connection; and network link filtering means for filtering said user traffic at the network provider site for selecting high-priority traffic to be carried to said user site over said backup connection on receipt of said fault signal.

Antoniou discloses service-oriented protection scheme for a radio access network (see the Title) comprising the following features.

Regarding claim 3, further comprising at said user site means for filtering said user traffic on receipt of the fault signal for selecting high-priority traffic to be carried over said backup connection (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

Regarding claim 4, further comprising link filtering means at the network provider site for selecting high-priority traffic to be carried to said user site over said backup connection on receipt of said fault signal (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

Regarding claim 5, further comprising: means for filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the high priority traffic to be transmitted over said backup connection (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7); and network link filtering means for filtering said user traffic at the network provider site for selecting high-priority traffic to be carried to said user site over said backup connection on receipt of said fault signal (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Dop by using the features, as taught by Antoniou, in order to satisfy quality of service.

8. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Dop et al. (US Patent No. 5,185,779) and further in view of Simmons (US Patent No. 6,597,658; hereinafter Simmons).

Li and Dop disclose the claimed limitations in paragraph 6 above.

In addition, Li also discloses the following features:

Regarding claim 8, a network provider reconfiguring mechanism for separating (see "router" recited in para. [0034], page 3) traffic from said user traffic routing traffic to said user site over said backup connection (see "routes the data to the appropriate Internet appliance" by the router recited in para. [0034], page 3).

Li and Dop do not disclose the following features: regarding claim 6, wherein said fault signal indicates an overload of said wireline link; regarding claim 8, further comprising: network link filtering means for filtering said user traffic at said network provider site on receipt of said fault signal for selecting said overload traffic.

Simmons discloses a method and system of dynamic traffic control in a communication network (see the Title) comprising the following features.

Regarding claim 6, wherein said fault signal indicates an overload of said wireline link (see "overload condition" recited in col. 3, lines 47-50).

Regarding claim 8, further comprising: network link filtering means for filtering said user traffic at said network provider site on receipt of said fault signal for selecting said overload traffic (see routing overload traffic into protection links recited in col. 3, lines 29-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Dop by using the features, as taught by Simmons, in order to prevent or reduce congestion.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Dop et al. (US Patent No. 5,185,779) and further in view of Simmons (US Patent No. 6,498,844) and Gerszberg et al. (US Patent No. 6,714,534; hereinafter Gerszberg).

Li, Dop, and Simmons disclose the claimed limitations in paragraph 8 above.

In addition, Simmons also disclose the following features:

Regarding claim 7, means for filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic the overload traffic to be carried over said backup connection (see routing overload traffic into protection links recited in col. 3, lines 29-44).

Li, Dop, and Simmons do not disclose the following features: regarding claim 7, a network provider reconfiguring mechanism for merging said overload traffic back into said user traffic.

Gerszberg discloses a system architecture for bypassing a local exchange carrier (see the Abstract) comprising the following features.

Regarding claim 7, a network provider reconfiguring mechanism for merging traffic back into said user traffic (see "aggregate" recited in col. 14, lines 27-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li, Dop, and Simmons by using the features, as taught by Gerzberg, in order to restore the traffic and reassembly packets or frames.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 13-15, 36, 40 are rejected under 35 U.S.C. 102(e) as being anticipated by over Li (US Patent Application Publication No. 2004/0078626).

Li discloses a system and method for failure recovery of high-speed modems (see the Title) comprising the following features.

Regarding claim 13, a method for protecting a wireline access link (see the Title), comprising the steps of: a) transmitting user traffic between a user site and a network provider site in a broadband access connection carried over a wireline link (see Internet access on high-speed modem recited in the Abstract); b) monitoring integrity of said wireline link (see “The modem interchange software detects” recited in para. [0033] on page 3) and generating a fault signal upon detection of a specified under-performance of said broadband access connection (see “communicates the failure to the modem

backup software module” recited in para. [0033] on page 3); and c) switching said user traffic from said broadband access connection to a backup connection according to said fault signal (see “switch from the high-speed modem to a dial-up modem” recited in para. [0033], page 3; and how “the data redirection software module” redirects all data recited in [0034], page 30).

Regarding claim 14, further comprising d) switching back said user traffic from said backup connection to said broadband access connection once said fault signal has been cleared (Fig. 14, see steps 380 through 405 for restoring the high-speed connection).

Regarding claim 15, wherein said fault signal indicates a failure of the wireline link (see “detects the high-speed modem failure” recited in para. [0033] on page 3).

Regarding claim 36, further comprising maintaining said wireline link always available for traffic (see once high-speed modem resumes, high-speed connection is reestablished recited in Fig. 10).

Regarding claim 40, wherein said step d) comprises transmitting test data over said wireline link (see “detects that change and communicates that status” recited in para. [0090], page 7) to determine recovery of said broadband access connection (see “high-speed modem resumes” recited in para. [0090], page 7).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2616

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 16, 20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Antoniou et al. (US Patent No. 6,965,775).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 16, comprising filtering said user traffic on receipt of said fault signal for selecting high-priority traffic to be carried over said backup connection; regarding claim 20, further comprising filtering said user traffic at the network provider on receipt of said fault signal for selecting high-priority traffic to be carried to said user site over said backup connection; regarding claim 22, further comprising: filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the high-priority traffic to be transmitted over said backup connection; and filtering said user traffic at said network provider site on receipt of said fault signal for selecting high-priority traffic to be carried to said user site over said backup connection.

Antoniou discloses service-oriented protection scheme for a radio access network (see the Title) comprising the following features.

Regarding claim 16, comprising filtering said user traffic on receipt of said fault signal for selecting high-priority traffic to be carried over said backup connection (see

protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

Regarding claim 20, further comprising filtering said user traffic at the network provider on receipt of said fault signal for selecting high-priority traffic to be carried to said user site over said backup connection (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

Regarding claim 22, further comprising: filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the high-priority traffic to be transmitted over said backup connection (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7); and filtering said user traffic at said network provider site on receipt of said fault signal for selecting high-priority traffic to be carried to said user site over said backup connection (see protection path is configured with quality of service recited in col. 2, lines 38-47; and see Table 1 on page 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Antoniou, in order to satisfy quality of service.

14. Claims 17-18, 21, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Gupta et al. (US Patent Application Publication No. 2002/0075868; hereinafter Gupta).

Li discloses the claimed limitations in paragraph 11 above.

Li also disclose the following features:

Regarding claim 38, further comprising maintaining said wireline link unavailable when traffic is switched over the dial-up link (see once switching to dial-up link, all the traffic is redirected through dial-up modem while the high-speed link is unavailable recited in para. [0089], page 7).

Regarding claim 39, further comprising maintaining dial-up link unavailable when traffic is switched over said wireline link (see once the high-speed modem resumes, the dial-up connection is shut down while the high-speed connection is reestablished recited in para. [0090] and Fig. 14).

Li does not disclose the following features: regarding claim 17, wherein said backup connection is a wireless link; regarding claim 18, wherein said step of filtering comprises adapting the bandwidth of said wireline link to the bandwidth of said wireless link by discarding low priority data from said user traffic; regarding claim 21, wherein said step of filtering comprises one of discarding and buffering low priority data from said user traffic; regarding claim 37, further comprising maintaining said wireless link available only on request; regarding claim 38; further comprising maintaining said wireline link unavailable when traffic is switched over said wireless link; regarding claim 39, further comprising maintaining said wireless line link unavailable when traffic is switched over said wireline link.

Gupta discloses a network node with multi-medium interfaces (see the Title) comprising the following features.

Regarding claim 17, wherein said backup connection is a wireless link (see “wireless link as a backup link” recited in para. [0043], page 4).

Regarding claim 18, wherein said step of filtering comprises adapting the bandwidth of said wireline link to the bandwidth of said wireless link (see multiple interface is configured to transfer data using fiber optic and wireless links recited in para. [0041], page 3) by discarding low priority data from said user traffic (see dropping low priority data packets recited in para. [0086], pages 9-10).

Regarding claim 21, wherein said step of filtering comprises one of discarding and buffering low priority data from said user traffic see dropping low priority data packets recited in para. [0086], pages 9-10).

Regarding claim 37, further comprising maintaining said wireless link available only on request (see "the wireless link as a backup link when the fiber-optic link is unavailable" recited in para. [0043], page 4; and "link connect request signal" recited in para. [0044], page 4).

Regarding claim 38, wherein said backup connection is a wireless link (see "wireless link as a backup link" recited in para. [0043], page 4).

Regarding claim 39, wherein said backup connection is a wireless link (see "wireless link as a backup link" recited in para. [0043], page 4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Gupta, in order to implement the system easier, keep it work in almost any topology, and satisfy quality of service.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Gupta et al. (US Patent

Application Publication No. 2002/0075868) and further in view of Simons et al. (US Patent No. 7,023,845; hereinafter Simons).

Li and Gupta disclose the claimed limitations in paragraph 14 above.

In addition, Gupta also discloses the following features:

Regarding claim 19, wherein said step of filtering comprises adapting the bandwidth of said wireline link to the bandwidth of said wireless link (see multiple interface is configured to transfer data using fiber optic and wireless links recited in para. [0041], page 3) by discarding low priority data from said user traffic (see dropping low priority data packets recited in para. [0086], pages 9-10).

Li and Gupta do not disclose the following features: regarding claim 19, wherein said step of filtering comprises adapting the bandwidth of said wireline link to the bandwidth of said wireless link by buffering low priority data from said user traffic.

Simons discloses a network device including multiple mid-planes (see the Title) comprising the following features.

Regarding claim 19, wherein said step of filtering comprises buffering low priority data from said user traffic (see "buffer lower priority traffic" recited in col. 49, lines 41-48).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Gupta by using the features, as taught by Simons, in order to prevent or reduce congestion.

16. Claims 23, 25, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Simmons (US Patent No. 6,597,658).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 23, wherein said fault signal indicates an overload condition of said wireline link; regarding claim 25, further comprising filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the overload traffic to be carried over said backup connection; regarding claim 27, further comprising, at said network provider site: filtering said user traffic on receipt of said fault signal for selecting said overload traffic; and routing said overload traffic to said user site over said backup connection.

Simmons discloses a method and system of dynamic traffic control in a communication network (see the Title) comprising the following features.

Regarding claim 23, wherein said fault signal indicates an overload of said wireline link (see "overload condition" recited in col. 3, lines 47-50).

Regarding claim 25, further comprising filtering said user traffic at said user site on receipt of said fault signal for selecting from said user traffic, the overload traffic to be carried over said backup connection (see routing overload traffic into protection links recited in col. 3, lines 29-44).

Regarding claim 27, further comprising, at said network provider site: filtering said user traffic on receipt of said fault signal for selecting said overload traffic; and

routing said overload traffic to said user site over said backup connection (see routing overload traffic into protection links recited in col. 3, lines 29-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Simmons, in order to prevent or reduce congestion.

17. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Antoniou et al. (US Patent No. 6,965,775) and further in view of Simmons (US Patent No. 6,597,658).

Li and Antoniou disclose the claimed limitations in paragraph 13 above. Li and Antoniou do not disclose the following features: regarding claim 24, wherein an overload condition is recognized based on a measured throughput near wireline link capacity.

Simmons discloses a method and system of dynamic traffic control in a communication network (see the Title) comprising the following features.

Regarding claim 24, wherein an overload condition (see "overload condition" recited in col. 3, lines 49-50) is recognized based on a measured throughput near wireline link capacity (see "excess capacity" recited in col. 3, lines 34-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Antoniou by using the features, as taught by Simmons, in order to prevent or reduce congestion.

18. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Simmons (US Patent No. 6,597,658) and further in view of Gerszberg et al. (US Patent No. 6,714,534).

Li and Simmons disclose the claimed limitations in paragraph 16 above. Li and Simmons do not disclose the following features: regarding claim 26, merging said overload traffic back into said user traffic at said network provider site.

Gerszberg discloses a system architecture for bypassing a local exchange carrier (see the Abstract) comprising the following features.

Regarding claim 26, merging said overload traffic back into said user traffic at said network provider site (see "aggregate" recited in col. 14, lines 27-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Simmons by using the features, as taught by Gerzberg, in order to restore the traffic and reassembly packets or frames.

19. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Sternagle (US Patent Application Publication No. 2005/0157707; hereinafter Sternagle).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 28, wherein said fault signal is generated based on signaling of link configuration or availability using the 802.3ad Ethernet link aggregation protocol.

Sternagle discloses scalable, reliable session initiation protocol signaling routing node (see the Abstract) comprising the following features.

Regarding claim 28, wherein said fault signal is generated based on signaling of link configuration or availability using the 802.3ad Ethernet link aggregation protocol

(see IEEE 802.3ad implemented to make automatic failover recited in para. [0056], page 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Sternagle, in order to make automatic failover possible (Sternagle: para. [0056], page 5).

20. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Cioffi (US Patent Application Publication No. 2005/0152385; hereinafter Cioffi).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 29, wherein said step c) is based on signaling of link configuration or availability within the IETF RFC 1717/RFC 1990 Multi-link Point to Point protocol.

Cioffi discloses a high speed multiple loop DSL system (see the Title) comprising the following features.

Regarding claim 29, wherein said step c) is based on signaling of link configuration or availability within the RFC 1990 Multi-link Point to Point protocol (see "Multilink PPP" recited in para. [0040], page 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Cioffi, in order to provide increased bandwidth and redundancy in the event of line failures (Cioffi: para. [0040], page 3).

21. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Dop et al. (US Patent No. 5,185,779).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 30, wherein said fault signal is generated based on detection of a loss of signal, absence of a signal within a time-out interval, or a failure to respond to an active health test condition.

Dop discloses the cellular alarm backup system (see the Title) comprising the following features:

Regarding claim 30, wherein said fault signal is generated based on detection of a loss of signal (see "the presence of a cut or interruption" recited in col. 2, lines 30-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Dop, in order to detect a fault in the system.

22. Claim 31-32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Smyth et al. (US Patent No. 6,598,229; hereinafter Smyth).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 31, wherein said fault signal is generated in response to a degraded performance detected on said wireline link; regarding claim 32, wherein said degraded condition includes an increased bit error rate, packet loss,

excessive latency, or jitter; regarding claim 34, wherein said user-programmable link preferences.

Smyth discloses a system and method for detecting and correcting a defective transmission channel (see the Title) comprising the following features:

Regarding claim 31, wherein said fault signal is generated (see "signals the channel re-allocation module" recited in col. 10, lines 10-15)in response to a degraded performance detected on said wireline link (see "a degraded signal to noise performance" recited in col. 9, line 49).

Regarding claim 32, wherein said degraded condition includes an increased bit error rate (see monitoring the rising of number of error signals recited in col. 9, lines 66-67).

Regarding claim 34, wherein said user-programmable link preferences (see the flowchart of Fig. 4) include a usage quota on the wireline link (see "pre-defined threshold" recited in col. 9, lines 66-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Smyth, in order to detect a fault in the system.

23. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Gupta et al. (US Patent Application Publication No. 2002/0075868) and further in view of Smyth et al. (US Patent No. 6,598,229).

Li and Gupta disclose the claimed limitations in paragraph 14 above. Li and Gupta do not disclose the following features: regarding claim 33, wherein said fault signal is generated based on user-programmable link preferences.

Smyth discloses a system and method for detecting and correcting a defective transmission channel (see the Title) comprising the following features:

Regarding claim 33, wherein said fault signal is generated based on user-programmable link preferences (see the flowchart of Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Gupta by using the features, as taught by Smyth, in order to detect a fault in the system.

24. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Koyanagi et al. (US Patent Application Publication No. 2006/0168336; hereinafter Koyanagi).

Li discloses the claimed limitations in paragraph 11 above. Li does not disclose the following features: regarding claim 41, wherein said test data comprises one of low-priority user traffic and test probes.

Koyanagi discloses re-challenge communication control method and system (see the Title) comprising the following features:

Regarding claim 41, wherein said test data comprises one of low-priority user traffic and test probes (see "priority is lower" recited in para. [0019], page 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Koyanagi, in order to simplify the test of recovery of broadband connection.

25. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Hrastar et al. (US Patent Application Publication No. 2001/0043562; hereinafter Hrastar).

Li discloses the claimed limitations in paragraph 11 above.

In addition, Li also discloses the following features:

Regarding claim 42, further comprising switching back said user traffic from said backup link on said wireline link (Fig. 14, see steps 380 through 405 for restoring the high-speed connection) and determining if said fault signal has been cleared (see "detects that change and communicates that status" recited in para. [0090], page 7).

Li does not disclose the following features: regarding claim 42, further comprising switching back said user traffic from said backup link on said wireline link at specific intervals.

Hrastar discloses a method of using routing protocols to reroute packets during a link failure (see the Title) comprising the following features:

Regarding claim 42, comprising switching back said user traffic from said backup link on said wireline link at specific intervals (see "predetermined period of time" recited in para. [0024], page 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li by using the features, as taught by Hrastar, in order to implement the system easier.

26. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Gupta et al. (US Patent Application Publication No. 2002/0075868) and further in view of Higginson et al. (US Patent No. 5,610,951; hereinafter Higginson).

Li and Gupta disclose the claimed limitations in paragraph 14 above. Li and Gupta do not disclose the following features: regarding claim 43, wherein said time intervals increase progressively to reduce the impact of testing on traffic performance.

Higginson discloses efficient ATM cell synchronization (see the Title) comprising the following features:

Regarding claim 43, wherein said time intervals increase progressively to reduce the impact of testing on traffic performance (see "increasing the test period length" recited in col. 3, lines 10-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Li and Gupta by using the features, as taught by Higginson, in order to reduce the traffic.

27. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent Application Publication No. 2004/0078626) in view of Antoniou et al. (US Patent No. 6,965,775) and further in view of Notani (US Patent Application Publication No. 2003/0028093; hereinafter Notani).

Li and Antoniou disclose the claimed limitations in paragraph 13 above. Li and Antoniou do not disclose the following features: regarding claim 44, wherein said high priority traffic is selected by means of policing or shaping low priority traffic at said user site when traffic presented exceeds the available upstream link capacity; regarding claim 45, wherein said high priority traffic is selected by means of policing or shaping low priority traffic at said network provider site when traffic presented exceeds the available upstream link capacity.

Notani discloses (see the Title) comprising the following features:

Regarding claim 44, wherein said high priority traffic is selected by means of policing or shaping low priority traffic at said user site (see "shaping function" recited in para. [0136], page 8) when traffic presented exceeds the available upstream link capacity (see "exceeds" recited in para. [0231], page 14).

Regarding claim 45, wherein said high priority traffic is selected by means of policing or shaping low priority traffic at said network provider site (see "shaping function" recited in para. [0136], page 8) when traffic presented exceeds the available upstream link capacity (see "exceeds" recited in para. [0231], page 14).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Q. Tran whose telephone number is (571) 272-9737. The examiner can normally be reached on Mon-Fri: 7:30 am - 5 pm, off alternative Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TQT

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to be 'Kwang Bin Yao', written in a cursive style.